TRANSP
National Transportation Safety Board
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FACTŬAL REPORT
Franco S
AVIATION
FTYBOR

NTSB ID: NYC02LA155	Aircraft Registration Number: N31SW
Occurrence Date: 08/06/2002	Most Critical Injury: Serious
Occurrence Type: Accident	Investigated By: NTSB

Location/Time

Nearest City/Place	State	Zip Code	Local Time	Time Zone	
Coatesville	PA	19320	1035	EDT	
Airport Proximity: Off Airport/Airstrip	Distance From	m Landing Facility: 0.5		Direction Fro	m Airport: 290

Aircraft Information Summary

All of all fill of matters									
Aircraft Manufacturer	Model/Series	Type of Aircraft							
Piper	PA-28-235	Airplane							

Sightseeing Flight: No

Air Medical Transport Flight: No

Narrative

Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:

On August 6, 2002, about 1035 eastern daylight time, Piper PA-28-235, N31SW, was substantially damaged during a forced landing near the Chester County G.O. Carlson Airport (40N), Coatesville, Pennsylvania. The certificated commercial pilot was seriously injured. Visual meteorological conditions prevailed, and no flight plan was filed for the personal flight, which originated from the Aurora Municipal Airport (ARR), Chicago, Illinois. The flight was conducted under 14 CFR Part 91.

According to the pilot, he flight planned the estimated 720 statute mile flight using the Piper PA-28-235 Owners Handbook, and estimated that the fuel burn would be approximately 12.7 gallons per-hour. The pilot also "added" an additional 5 gallons of fuel to the fuel burn estimates for taxi-time, run-up, and climb to altitude. The pilot then used a "more conservative" fuel burn rate of 15 gallons per hour for his planning.

The flight departed ARR on August 5, 2002. The flight was flown between 5,500 and 7,500 feet msl, at a 70 percent power setting. The mixture was leaned "aggressively," just rich of peak.

During the flight, the pilot elected to divert to the Delaware Municipal Airport (DLZ), Delaware, Ohio, due to weather, and remained overnight. The airplane was not refueled during the layover.

The following day, the pilot departed DLZ, and proceeded to 40N. The flight was flown at the same altitude and power settings as the previous day.

Approaching the area of 40N, about 1 mile from runway 11, the engine lost all power. The pilot attempted to enter the traffic pattern for runway 29, and while on the downwind leg, realizing that he would not be able to land on the runway, he elected to perform a forced landing into a wooded area.

The airplane struck several trees during the forced landing, descended to the ground, and came to rest upright, about 1/2-mile from the airport. Both wings were separated from the fuselage during the accident sequence.

The pilot additionally stated that the total flight time from ARR to 40N was about 4.8 hours, and that the fuel gauge for the right main tank indicated between 7-10 gallons remaining prior to the engine losing power.

After the accident, the pilot stated to the airplane's owner that he had flown a very high downwind, as he was concerned about running out of fuel, and that the engine had quit on downwind.

Examination of the wreckage by a Federal Aviation Administration (FAA) inspector revealed that both wing fuel tanks were ruptured, and no fuel stains were observed on the fuselage skin. The fuel

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Narrative (Continued)

selector was in the "OFF" position. The inspector also stated that there was an absence of fuel odor at the accident site, and no discoloration of foliage was observed.

When the wreckage was recovered, no fuel was observed in either the fuel tanks or lines.

According to the Piper PA-28-235 Information Manual, the total fuel capacity of the airplane was 84 gallons, 82 of which were usable. The manual also stated that the fuel burn at 70 percent power was approximately 12.0 gallons per hour, and the fuel burn at 75 percent power was approximately 13.0 gallons per hour. The estimated range, cruising at 6,500 feet, at 70 percent power, was approximately 975 statute miles. The estimated range, cruising at 6,500 feet, at 75 percent power, was approximately 915 statute miles.

Review of a Lycoming O-540-B series engine Operator's Manual revealed that the fuel burn, at a power setting of 70 percent, at a pressure altitude of 6,000 feet, and a full rich mixture setting, was about 15 gallons per hour.

The wind reported at a nearby airport, about the time of the accident, were from 350 degrees at 15 knots, with gusts to 19 knots.

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"FTY BOR"		Occi	inence	e Type.	Accident								
Landing Facility/Approach In	formation				A:				Τ		rt.	D	\A/' -l(l-
Airport Name			Airpoi	rt ID:	Airport Eleva			way Used	Runwa	Runway Length			way Width
Chester County Airport			40N		660 Ft.	MSL							
Runway Surface Type: Unknown													
Runway Surface Condition: Unknown	own												
NIONIE	_												
Type Instrument Approach: NONE													
VFR Approach/Landing: Forced Landing													
VI IX Approactive and trigg. Forcest Earthuring													
Aircraft Information													
Aircraft Manufacturer				Model/S							Numb		
Piper				PA-28	-235 					28-7	41011	0	
Airworthiness Certificate(s): Normal													
Landing Gear Type: Tricycle													
Homebuilt Aircraft? No	Number of Seats:	4		Certified	Max Gross W	t.		3000 LBS Numb		Numbe	ber of Engines: 1		: 1
Engine Type: Reciprocating			_	Engine Manufacturer: Model/Series: Lycoming O-540-B4									ed Power: 5 HP
- Aircraft Inspection Information													
Type of Last Inspection			Date	Date of Last Inspection Time Si			ince Last Inspection			Airframe Total Time			
Annual			12/2	12/2001			36 Hours			Hours			
- Emergency Locator Transmitter (ELT) Information										•		
ELT Installed? Yes	ELT Operat	ed? No)			EL	Γ Aided i	n Locating A	ccident S	Site? No)		
Owner/Operator Information													
Registered Aircraft Owner			S	Street Ac	ddress								
James V. Spatola III				City							Sta	te	Zip Code
				Doylestown									18901
Operator of Aircraft			s	treet Ad		Doo	ld Airon	off Owner					
			Same as Reg'd Aircraft Owner City								Sta	te	Zip Code
Same as Reg'd Aircraft Owner				,									<u> </u>
Operator Does Business As:							O	perator Design	gnator Co	ode:			
- Type of U.S. Certificate(s) Held: I													
Air Carrier Operating Certificate(s)	:												
Operating Certificate: Operator Certificate:													
Regulation Flight Conducted Unde	r: Part 91: Genera	al Avia	tion		1 .								
Type of Flight Operation Conducted													
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AVIATI	Occurrence Type: Accident											
First Pilot Information												
Name					City				5	State	Date of Birth	Age
On File					On File	ile On File On File					45	
Sex: M Seat Occupied	: Left	Prir	ncipal Profes	sion: Civiliar	n Pilot				Certific	cate Num	ber: On File	
Certificate(s): Flight Instructor; Commercial												
Airplane Rating(s): Multi-engine Land; Single-engine Land												
Rotorcraft/Glider/LTA: None												
Instrument Rating(s): Airpl	lane											
Instructor Rating(s): Airplane Multi-engine; Airplane Single-engine; Instrument Airplane												
Type Rating/Endorsement for Accident/Incident Aircraft? No Current Biennial Flight Review? 08/2001												
Medical Cert.: Class 2	Medica	al Cert. Status	S: None		,			Date	of Last	Medical	Exam: 08/2003	
	•							·				
- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Mult-Engine	Night		Actual	nstrument Sin	nulated	Rotorcraft	Glider	Lighter Than Air
Total Time	6418	94	6350	68	38	87						
Pilot In Command(PIC)						_						
Instructor						_		_				
Last 90 Days	366	4				4						
Last 30 Days	138	4	0		-	4		-				
Last 24 Hours Seatbelt Used? Yes	2	lder Harness	2			vicol	logy Por	l formed?	No.		L Second Pilot? N	
Sealbeil Osed? Tes	Snou	nder Harriess	Usea? res		110	IXICOI	logy Fei	ioiiileu :	INO		becond Filot: 14	U
Flight Plan/Itinerary												
Type of Flight Plan Filed: No	one											
Departure Point					Si	State Airport Identifier Departure			arture Time	Time Zone		
Delaware					0	Н		DLZ		080		EDT
Destination					Si	tate	A	irport Ide	entifier			
Same as Accident/Incide	ent Location							0N				
Type of Clearance: None												
Type of Airspace: Class	G											
Weather Information												
Source of Briefing: Commercial Weather Service												
Method of Briefing: Teleph	none											
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	Occurrence Type: Accident													
Weather	Information													
WOF ID	Observation Time	Time Zone		WOF Elev	ation	WOF D	istance Fro	m Acci	dent Site		Direction From Accident Site		ite	
												_		
LNS	1053	EDT		403	t. MSL				20 NM		300 Deg. Mag.			
Sky/Lowes	st Cloud Condition: Clea	ar					Ft. A	GL	Condition of Light: Day					
Lowest Ce	iling: None			F	t. AGL	Visib	oility:	10	SM	Altii	meter:	29.99	"Hg	
Temperatu	ıre: 23 °C	Dew Point:		12 °C	Wind	Direction	: 350			Dei	nsity Altitude:		Ft.	
Wind Spee	ed: 15	Gusts:	19		Weatl	ner Cond	tions at Acc	ident S	ite: Visual C	ond	itions			
Visibility (F	RVR): Ft	. Visibilit	y (RV	V)	SM	Intensit	ty of Precipi	tation:						
Restriction	s to Visibility: None													
Type of Pro	ecipitation: None													
Accident	Information													
Aircraft Da	mage: Substantial			Aircraft F	Aircraft Fire: None					Aircraft Explosion None				
Classificati	ion: U.S. Registered/l	J.S. Soil												
- Injury Su	mmary Matrix	Fatal	Serio	ous M	nor	None	TOTAL							
First Pi	ilot			1			1	Ī						
Second	d Pilot							7						
Studen	nt Pilot							1						
Flight I	nstructor							1						
Check	Pilot							1						
Flight E	Engineer							1						
Cabin /	Attendants							1						
Other (Crew							1						
Passer	ngers							1						
- TOTAL A	ABOARD -			1			1	ī						
Other (Ground							1						
- GRANE	O TOTAL -			1			1	ī						
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Investigator-In-Charge (IIC)

Stephen M. Demko

Additional Persons Participating in This Accident/Incident Investigation:

Jesse Kern

ASI

 FAA

Philadelphia, PA